

**INSTALLATION OF VERSION 10.0 SOFTWARE FOR  
THE RADAR DATA ACQUISITION (RDA), RADAR  
PRODUCT GENERATION (RPG) AND PRINCIPAL  
USER PROCESSOR (PUP)**

**DOPPLER METEOROLOGICAL RADAR  
WSR-88D**



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COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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**NWS: EHB-6, Software Note 11**  
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**FAA: EEM Modification Handbook 6345.1 Chap 6, CHG 6**

**NWS APPROVAL:**

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**FAA APPROVAL:**

\_\_\_\_\_ **Date** \_\_\_\_\_  
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\_\_\_\_\_ **Date** \_\_\_\_\_  
**Edward L. Berkowitz, Chief**  
**System Support Branch**  
**Operational Support Facility**  
**TOMA**

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**1. SUBJECT**

Installation of Version 10.0 Software for the Radar Data Acquisition (RDA), Radar Product Generation (RPG) and Principal User Processor (PUP).

**2. PURPOSE**

The purpose of this routine document is to provide installation instructions for the RDA, RPG, and PUP Software Version 10.0 upgrade. It is issued as a result of an Operational Support Facility (OSF) Engineering Change Proposal (ECP) F0095.

This revision affects the RDA, RPG and PUP software. Version 10.0 is not completely compatible with version 9.0 software. Version 9.0 software should be retained for archival purposes. Map changes are not required.

Collocated RPG/RDA and Non-Collocated RPG sites require two technicians to perform the installation, one at the Unit Control Position (UCP) and the other at the RDA.

For additional information concerning this software upgrade, contact the Operational Support Facility, System Support Branch, Norman, Oklahoma; phone number: (405) 366-6540 ext 3229.

**3. SITES AFFECTED**

This software upgrade applies to all WSR-88D RDA, RPG and PUP sites.

**4. ESTIMATED COMPLETION DATE**

The target completion date of this modification is 60 days after receipt of modification document and kit.

**5. EQUIPMENT AFFECTED**

Radar Data Acquisition (RDA) Group.  
Radar Product Generation (RPG) Group.  
Principal User Processor (PUP) Group.

**6. SOFTWARE AFFECTED**

RDA, CPCI-01; RPG, CPCI-03; PUP, CPCI-04; AND RDASOT, CPCI-06.

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**7. MODIFICATION ACCOMPLISHED BY**

Site electronic systems analysts and/or electronic technicians will accomplish this modification. Two technicians/staff personnel may be required to perform these procedures.

**8. MATERIAL REQUIRED**

System Sites:

Installation instructions for the RDA, RPG, and PUP; sufficient blank tapes to make the required backups (number required are explained in attachment 1, step 6) and one system installation kit containing the following:

**NOTE**

NWS Redundant sites will receive 2 sets of SCSI tapes for each RDA, one set for Ch1 and one set for Ch2.

FAA Redundant sites will receive 2 sets of SCSI tapes for the RDA and RPG; one set for Ch1 and one set for Ch2.

<b>Nomenclature</b>	<b>Qty</b>
Software configuration matrix	1 each
SCSI tape containing RDA operating system files	1 each
SCSI tape containing RDA application files	1 each
SCSI tape containing RDA 10.0 merge tools	1 each
SCSI tape "blank" RDA adaptation tape	1 each
SCSI tape containing RPG operating system files	1 each
SCSI tape containing RPG application files	1 each
SCSI tape containing RPG 10.0 merge tools	1 each
SCSI tape "blank" RPG adaptation tape	1 each
* SCSI tape containing PUP application files	1 each
* SCSI tape containing PUP operating system files (Satellite communication sites only)	1 each
* SCSI tape containing PUP 10.0 merge tools	1 each
* SCSI tape "blank" PUP adaptation tape	1 each
* Graphic tablet overlay	1 each
Build 10.0 summary of changes for maintainers	1 each
Build 10.0 quick start training guide	1 each
Adaptation parameter pamphlet	1 each

\* Kit items that will not be sent to FAA Redundant RDA/RPG sites.

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PUP Sites:

Installation instructions for PUP and one PUP installation kit containing:

<b>Nomenclature</b>	<b>Qty</b>
Software configuration matrix	1 each
SCSI tape containing PUP application files	1 each
SCSI tape containing PUP operating system files (Satellite communication sites only)	1 each
SCSI tape containing PUP 10.0 merge tools	1 each
SCSI tape "blank" PUP adaptation tape	1 each
Graphic tablet overlay	1 each
Build 10.0 quick start training guide	1 each
Adaptation parameter pamphlet	1 each

**9. SOURCE OF MATERIALS**

The items in paragraph 8 will be direct shipped to each site by the National Weather Service (NWS) OSF.

**10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED (SOFTWARE)**

Not applicable.

**11. TIME AND PERSONNEL REQUIRED**

10 staff-minutes at each modem for baud rate increase.  
3 staff-hours for RDA installation.  
6 staff-hours for Redundant RDA installation.  
5 staff-hours for RPG installation.  
10 staff-hours for Redundant RPG installation.  
6 staff-hours for PUP installation.

**12. DOCUMENTS AFFECTED**

- a. Maintenance Instructions, Radar Data Acquisition (RDA) Group, dated May 1, 1996.  
NWS EHB 6-510, Change 3 and Change 4  
AF TO 31P1-4-108-152, Change 3 and Change 4  
FAA TI 6460.1, V7, Change 3 and Change 4

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**12. DOCUMENTS AFFECTED (Continued)**

- b. User's Guide Radar Data Acquisition (RDA), dated February 3, 1995.  
NWS EHB 6-510-1, Change 2 and TP-1  
AF TO 31P1-4-108-168-1, Change 2 and TP-1  
FAA TI 6460.1, V32, Change 2 and TP-1
- c. User's Guide, Radar Data Acquisition (RDA) System Operability Test (RDASOT), dated October 1, 1996.  
NWS EHB 6-510-2 and Change 1  
AF TO 31P1-4-108-178-1 and Change 1  
FAA TI 6460.1, V29 and Change 1
- d. Maintenance Instructions, Radar Product Generation (RPG), dated July 15, 1998.  
NWS EHB 6-520, Change 1 and Change 2  
AF TO 31P1-4-108-42, Change 1 and Change 2  
FAA TI 6460.1 V11, Change 1 and Change 2
- e. Operations Instructions Unit Control Position (UCP), dated August 15, 1992  
NWS EHB 6-521, Change 8  
AF TO 31P1-4-108-51, Change 8  
FAA TI 6460.1 V12, Change 8
- f. User's Guide, Unit Control Position (UCP), dated February 3, 1995.  
NWS EHB 6-521-1, Change 2  
AF TO 31P1-4-108-58-1, Change 2  
FAA TI 6460.1 V30, Change 2
- g. Maintenance Instructions, Principal User Processor (PUP) Group, dated January 15, 1998.  
NWS EHB 6-530, Change 1 and Change 2  
AF TO 31P1-4-108-182, Change 1 and Change 2  
FAA TI 6460.1, V15, Change 1 and Change 2  
NAVY EM400-AE-MMM-010/WSR88D, Change 1 and Change 2
- h. Operating Instructions, Principal User Processor (PUP) Group, dated February 22, 1995.  
NWS EHB 6-531, Change 2  
AF TO 31P1-4-108-61, Change 2  
FAA TI 6460.1, V16, Change 2  
NAVY EM400-AF-OPI-010/WSR88D, Change 2
- i. User's Guide, Principal User Processor/Radar Product Generation Operating Position (PUP/RPGOP), dated February 3, 1995.  
NWS EHB 6-531-1, Change 2 and Change 3  
AF TO 31P1-4-108-78-1, Change 2 and Change 3  
FAA TI 6460.1, V31, Change 2 and Change 3  
NAVY EM400-AG-GYD-010, Change 2 and Change 3

## **12. DOCUMENTS AFFECTED (Continued)**

- j. WSR-88D PUP Operator Handbook Vol I, dated August 1, 1998.
- k. WSR-88D PUP Operator Handbook Vol II, dated August 1, 1998.
- l. WSR-88D PUP Operator Handbook Vol III, dated August 1, 1998.
- m. WSR-88D Operator Handbook, Guide on Adaptable Parameters-Vol 1-RPG, dated August 1, 1998.
- n. WSR-88D Operator Handbook, Guide on Adaptable Parameters-Vol 2-PUP, TP-1, dated May 1, 1997.
- o. WSR-88D Operator Handbook, Guide on Adaptable Parameters-Vol 1-RDA, TP-2, dated May 1, 1997.
- p. WSR-88D Handbook UCP-1, Job Sheets, dated August 1, 1998.

## **13. VERIFICATION STATEMENT**

This modification was successfully installed at .

## **14. DISPOSITION OF SOFTWARE SCSI TAPES**

After a successful load of version 10.0 software, keep a backup copy of the previous version, the version 10.0 tapes, and a backup copy of version 10.0. Send all other tapes to:

System Support Branch, Configuration Management  
WSR-88D Operational Support Facility  
3200 Marshall Ave Suite 101  
Norman, Oklahoma 73072-8028

## **15. IMPLEMENTATION/PROCEDURES**

Perform procedures in attachments 1 through 5 for full thread system sites, and attachments 1 through 3 for PUP only sites.

**FAA:** Coordinate the shutdown with the appropriate air traffic control personnel, and perform the procedures that pertain to your sites. RDA and RPG sites perform the procedures on both channels.

**16. FAA DISTRIBUTION**

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

**17. CHANGES TO TABLE OF CONTENTS (FAA)**

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

**18. RECOMMENDATIONS FOR CHANGES (FAA)**

Forward any recommendation for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

**19. REPORTING INSTRUCTIONS**

**NWS**

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to instructions in EHB-4, Part 2, using reporting code RDA for a system site or PUP for a PUP site. Also, record the modification number in block 17(a) as S11 (see attachment 7 for a completed sample of WS Form A-26).

**DoD**

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

**FAA (Changes to Recorded Data)**

The National Airway Systems Engineering Division, AOS-200, is responsible for authorizing individual software upgrades to the FAA regions and FAA NEXRAD facilities. This will be accomplished as software updates occur. Any additional questions concerning this matter should be directed to Dennis Rooft, Weather Products Branch, AOS-250, (405) 366-6590, ext. 3247, or Bettie Loudenslager, AOS-250, (405) 954-5186.



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**ALL AGENCIES**

In addition, complete attachment 6 and fax, mail, or e-mail information to:

1. Mail Address:   System Support Branch, Logistics Section  
                          Operational Support Facility  
                          3200 Marshall Ave Suite 101  
                          Norman, Oklahoma 73072-8028
  
2. Fax Number:    (405) 366-6553  
                          ATTN: Configuration Management Section
  
3. E-mail Address: chunt@osf.noaa.gov